Appln. No.: 09/767,635   MATI-194US
Amendment Dated May 16, 2005
Reply to Office Action of March 14, 2005

Remarks/Arguments:

Claims 1-15 are pending in the above-identified application.

Claims 1, 5, 7, 8 and 12-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Conover et al. in view of Fridrich. This ground for rejection is overcome by the amendments to claims 1 and 13. In particular, neither Conover et al., Fridrich nor their combination disclose or suggest,

> means for selecting one member from among the multiple members for the at least one of said data objects according to a digital identifier for said apparatus; and

> means of transforming the selected data objects, including the one member, into an analog signal;

> wherein said digital identifier is coded by the selection of the one member from each of the at least one of said data objects and the analog signal identifies a unique copy of the digital work

as required by amended claim 1 or

> means for receiving a plurality of sequential data objects of said digital work, at least one of said sequential data objects having a corresponding artistically equivalent alternate data object that is noticeably different from the one of said sequential data objects when the one data object and the alternate data object are reproduced in analog form and least one of said sequential data objects including a plurality of members;

as required by amended claim 13. Basis for these amendments may be found in the specification at page 8, lines 1-7 and at page 2, line 22 through page 3, line 3. No new matter is added by these amendments.

Conover et al. concerns watermarking of digital content by adjusting the signal-to-noise ratio of the encoded DCT coefficients. It is noted that at column 14, lines 31-39, Conover et al. use the increased SNR of the DCT coefficients to identify the copy because it is not possible to distinguish noise in the analog signal from an encoded SNR while it is possible to distinguish noise in the DCT coefficients. This is because the DCT coefficients digital values and, so, should not exhibit noise-related differences among multiple copies. Thus, Conover et al. do not produce analog signals that identify a unique copy of the digital work. Similarly, with respect to claim 13, Conover et al. do not produce a data object and an alternate data object that are noticeably different when reproduced in analog form. Alternatively, if they are

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noticeably different then they are not artistically equivalent since one object exhibits more noise
than the other object.

Fridrich concerns a watermarking system that adds random smooth patterns to
an object to produce a watermarked object. Like Conover et al., however, Fridrich teaches only
processing of the watermarked version in the digital domain to extract its identity. (See Fig. 4
and col. 7, line 56 through col. 8, line 8. The only method taught by Fridrich to identify the
watermarked object involves processing transformed DCT coefficients in the digital domain.
Thus, the Fridrich does not teach any method for producing a watermarked image in which "the
analog signal identifies a unique copy of the digital work," as required by claim 1 or in which a
data object and an alternate data object are "noticeably different ... when ... reproduced in
analog form." Indeed, because Fridrich is adding a noise signal as the watermark, if the objects
were noticeably different in analog form then they would not be artistically equivalent.

The present invention also differs from the Conover et al. and Fridrich et al. in
that it encodes the image by selecting individual objects from among two sets of artistically
equivalent objects. Thus, the equivalent objects are artistically equivalent and yet
distinguishable from each other in analog form. This combination can not be met by Conover et
al., Fridrich nor their combination because both of these methods involve inserting noise into a
signal. If the noise is distinguishable when the signal is in analog form then the objects are not
artistically equivalent and if the noise is not distinguishable then the objects are not noticeably
different.

For the reasons set forth above, claims 1 and 13 are not subject to rejection
under 35 U.S.C. § 103(a) in view of Conover et al. and Fridrich. Claims 5, 7, 8 and 12 depend
from claim 1 and claim 14 depends from claim 13. Accordingly, these claims are not subject to
rejection under 35 U.S.C. § 103(a) in view of Conover et al. and Fridrich for at least the same
reasons as claims 1 and 13.

Claims 6, 9, 11 and 15 were rejected under 35 U.S.C. § 103(a) as being obvious
in view of Conover et al., Fridrich and Collart. Conover et al. and Fridrich are described above.
Collart was cited as teaching the use of an asymmetric cryptographic system in which one key
is used for encryption while another key is used for decryption. In Collart, all of the operations
occur in the digital domain. Collart does not describe any watermarking or any method by
which two artistically equivalent sets of objects may be processed to create a work in which the

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analog signal identifies the unique copy of the digital work or in which a data object and an
alternate data object are noticeably different when reproduced in analog form. Accordingly,
Collart does not provide the material that is missing from Conover et al. and Fridrich. Thus, for
the reasons set forth above, claims 1 and 13 are not are not subject to rejection under 35
U.S.C. § 103(a) in view of Conover et al., Fridrich and Collart and, thus, claims 6, 9 and 11,
which depend from claim 1, and claim 15, which depends from claim 13, are not subject to
rejection under 35 U.S.C. § 103(a) in view of Conover et al., Fridrich and Collart for at least the
same reasons.

Applicant appreciates the statement in the Office Action that claims 2-4 are
objected to as being dependent upon a rejected base claim but would be allowable if rewritten
to include the limitations of their base claim. Claim 2 has been so amended to include the
limitations of claim 1. Thus, claims 2-4 are in condition for allowance.

In view of the foregoing amendments and remarks, Applicant requests that the
Examiner reconsider and withdraw the rejection of claims 1 and 5-15 and the objection to
claims 2-4.

Respectfully submitted,

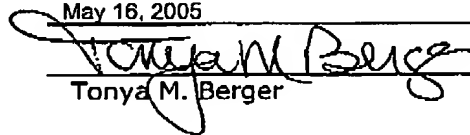Kenneth N. Nigon, Reg. No. 31,549
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Dated: May 16, 2005

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May 16, 2005

Tonya M. Berger

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